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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/751,029	12/29/2000	Robert H. Wilson	LEAR 0671 PUSP	7720
7:	590 02/20/2004		EXAMINER	
Matthew R. Mowers			KAO, CHIH CHENG G	
Brooks & Kushman P.C. 22nd Floor			ART UNIT	PAPER NUMBER
1000 Town Center			2882	
Southfield, MI 48075-1351			DATE MAILED: 02/20/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)	
			
Office Action Summary	09/751,029	WILSON, ROBER	т н.
Office Action Summary	Examin r	Art Unit	
	Chih-Cheng Glen Kao	2882	
The MAILING DATE of this communication a Period for Reply	appears on the cover sheet with	th the correspondence ac	Idress
A SHORTENED STATUTORY PERIOD FOR REF THE MAILING DATE OF THIS COMMUNICATION - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a r - If NO period for reply is specified above, the maximum statutory peri - Failure to reply within the set or extended period for reply will, by stated to reply received by the Office later than three months after the material patent term adjustment. See 37 CFR 1.704(b).	N. 1.136(a). In no event, however, may a re- reply within the statutory minimum of thirty od will apply and will expire SIX (6) MONT tute, cause the application to become AB.	eply be timely filed (30) days will be considered timel THS from the mailing date of this c ANDONED (35 U.S.C. § 133).	y. ommunication.
Status			
1)⊠ Responsive to communication(s) filed on <u>11</u>	December 2003.	·	
2a) This action is FINAL . 2b) ⊠ Th	is action is non-final.	:	•
3) Since this application is in condition for allow closed in accordance with the practice unde			e merits is
Disposition of Claims			
4)⊠ Claim(s) <u>1-23</u> is/are pending in the application	on.	· · · · · · · · · · · · · · · · · · ·	
4a) Of the above claim(s) is/are withd		* × •	
5) Claim(s) is/are allowed.			
6)⊠ Claim(s) <u>1-23</u> is/are rejected.	•		
7) Claim(s) is/are objected to.			
8) Claim(s) are subject to restriction and	d/or election requirement.	Section 1	:
Application Papers		e english te	*
9)☐ The specification is objected to by the Exami	ner.	A Company	
10)⊠ The drawing(s) filed on <u>03 July 2003</u> is/are:	a)⊠ accepted or b)⊡ object	ed to by the Examiner.	• •
Applicant may not request that any objection to the	- · · · · · · · · · · · · · · · · · · ·	• •	: *
Replacement drawing sheet(s) including the corr		· · · · · · · · · · · · · · · · · · ·	
11) The oath or declaration is objected to by the	Examiner. Note the attached	Office Action or form P1	O-152.
Priority under 35 U.S.C. §§ 119 and 120			
12) Acknowledgment is made of a claim for fore	ign priority under 35 U.S.C. §	119(a)-(d) or (f).	
a) All b) Some * c) None of: 1. Certified copies of the priority docume	ents have been received.	· .	
2. Certified copies of the priority docume		oplication No	*\$
3. Copies of the certified copies of the pr		received in this National	Stage
application from the International Bure * See the attached detailed Office action for a li		eceived	
13) Acknowledgment is made of a claim for dome since a specific reference was included in the	stic priority under 35 U.S.C. §	§ 119(e) (to a provisional	
37 CFR 1.78.	arovisional application has be	von rossivad	
a) ☐ The translation of the foreign language p 14)☐ Acknowledgment is made of a claim for dome			a specific
reference was included in the first sentence of			
Attachment(s)			
1) X Notice of References Cited (PTO-892)	4) Interview So	ummary (PTO-413) Paper No(s)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s	5) 🔲 Notice of Ini	formal Patent Application (PTC	

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DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 1. Claims 1-7 and 11-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashida (US Patent 6304178).
- 2. With regards to claim 1, Hayashida discloses a non-contact optoelectronic system and method for automatic door closure to detect the presence of an obstruction (Abstract), the system comprising at least one transmitter (Fig. 3, #24a-n) and sensor (Fig. 3, #24a'-n') for detecting the signal emitted by the at least one transmitter, a control module for monitoring and processing signal interrupts to detect an obstruction (col. 12, lines 57-63) and a motor control signal to stop and reverse upon detection of an obstruction in a window (col. 26, lines 3-6).

However, Hayashida does not specifically disclose the motor control signal in a door.

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the system and method of Hayashida with a reversing motor control signal in a door, since one would be motivated to incorporate it for safety as shown by Hayashida (col. 26, lines 9-11) and since it would have been obvious to incorporate it for different applications as shown by Hayashida (col. 1, lines 5-13, and col. 26, lines 42-47) for safety.

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3. With regards to claims 3 and 12, Hayashida suggests a system and method as recited above. Hayashida further discloses an entry area defined by a passage in a body, a door jamb,

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and a door (Fig. 21).

However, Hayashida does not specifically disclose the entry area of a vehicle.

Hayashida further teaches that this system may be employed with a vehicle (col. 1, lines

5-10).

It would have been obvious, to one having ordinary skill in the art at the time the

invention was made, to have the system of Hayashida with an entry area of a vehicle, since

Hayashida discloses that these applications are art-recognized equivalents (col. 1, lines 5-10) and

would have found it obvious to adapt the system into various applications. Secondly, it would

have been obvious, to modify the entry area as shown by Hayashida (Figs. 3, 10, 12, 13, 21, 23,

24, 28A, 29, 32A, and 36A, and col. 26, lines 18-20) to ensure that something does not collide

with the door (see Figs. 1 and 13 for example).

4. With regards to claims 4 and 15, Hayashida further discloses a pair of transmitters on an

inner surface of the door (Fig. 3, #4 and 24a-n).

5. With regards to claims 5-7, 16, and 17, Hayashida further discloses sensors in an array on

an inner surface of a door jamb (col. 3, lines 48-54, and Fig. 3).

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6. With regards to claims 14 and 19, Hayashida suggests a system and method as recited above. Hayashida further discloses the control module activating the transmitter and sensor upon a signal from a switching mechanism to close (col. 25, lines 61-66).

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- 7. With regards to claims 2, 13, and 20, Hayashida further discloses the control module processing signal interrupts and comparing them against stored values to determine an obstruction (col. 12, lines 57-63).
- 8. With regards to claims 11, 18, and 21, Hayashida further discloses infrared light (col. 5, lines 50-51).
- 9. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashida as applied to claim 1 above, and further in view of Chapdelaine et al. (US Patent 6157024).
- 10. With regards to claims 8 and 9, Hayashida suggests a device as recited above.

However, Hayashida does not disclose a reflective coating on the inner surface of a door and door jamb to reflect the emitted signal.

Chapdelaine et al. further discloses a reflective coating on the inner surface to reflect the emitted signal (col. 11, lines 42-52).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Hayashida with the reflective coating of

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Chapdelaine et al., since one would be motivated to increase reflectance to improve detector signal-to-noise ratio as implied from Chapdelaine et al. (col. 3, lines 1-10) for a better signal.

It would also have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested device of Hayashida in view of Chapdelaine et al. with reflective coatings on a door and door jamb, since rearranging parts of an invention involves only routine skill in the art as shown by Chapdelaine et al. (Fig. 2). One would be motivated to have the reflective coatings in the periphery, such as a door or door jamb, to cover areas where an object may be pinched as shown by Chapdelaine et al. (Fig. 2).

11. With regards to claim 10, Hayashida in view of Chapdelaine et al. suggests a device as recited above.

However, Hayashida does not disclose a metallic reflective coating.

Chapdelaine et al. further discloses a metallic reflective coating (col. 12, lines 35-50).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to the suggested device of Hayashida in view of Chapdelaine et al. with the metallic reflective coating, since one would be motivated to increase reflectance to improve a detector's signal-to-noise ratio as implied from Chapdelaine et al. (col. 3, lines 1-10) for a better signal.

12. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hayashida as applied to claim 19 above, and further in view of Boiucaner (US Patent 5142152).

Hayashida suggests a method as recited above.



However, Hayashida does not disclose a hardware fault detection of obstruction detection during the opening of an automatic door, wherein the step further comprises sending a pulse of infrared light from the transmitter to the sensor to test the system.

Boiucaner teaches a hardware fault detection of obstruction detection during the opening (col. 8, lines 15-20) of an automatic door (Fig. 1), wherein the step further comprises sending a pulse of infrared light (col. 4, lines 22-30) from the transmitter to the sensor (Fig. 1) to test the system (Fig. 10).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the suggested method of Hayashida with hardware fault detection of Boiucaner, since one would be motivated to run this test to insure that something that is being registered as an obstruction is an obstruction to be concerned with as implied from Boiucaner. (col. 8, lines 15-30).

Response to Arguments

- 13. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
- 14. Applicant's arguments, see Page 4, lines 13-15, filed 12/11/03, with respect to the rejection(s) of claim(s) 1-23 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Hayashida. Hayashida shows that one of ordinary skill

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in the art would have found it obvious to use collision prevention technology with various aperture-closing technologies (col. 1, lines 5-13, and col. 26, lines 42-47).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Æ.

gk

EDWARD J. GLICK
CURERVISORY PATENT EXAMINER